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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/689,754

10/20/2003

Masaaki Kusumi

KOIKE-01100

6013

7590

04/26/2006

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EXAMINER

BERNATZ, KEVIN M

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/689,754

Applicant(s)

KUSUMI ET AL.

Examiner

Kevin M. Bernatz

Art Unit

1773

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 10 April 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: _____.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
13. ☐ Other: _____.


KMB
April 22, 2006

Continuation of 11. does NOT place the application in condition for allowance because: applicants' arguments have been considered, but are not deemed persuasive. With regard to the 112 2nd Paragraph rejection of the term "hard", applicants essentially repeat their argument that the broad recitations in the disclosure are sufficient to allow one of ordinary skill to determine what is a "hard" membrane and what is not a "hard" membrane. The Examiner respectfully disagrees.

While the Examiner acknowledges that there are many different scales for objectively determining hardness, none of these scales have been reported in the present application. Regarding the argued language in the specification, the specification does not provide sufficient guidance to determine whether, for example, a film of amorphous carbon having a thickness of 0.075 microns would be deemed a "hard membrane" or a film of Si, C, O and H (as in applicants' intermediate film), which is taught to be "a kind of the hard membrane ... while not being so hard as the DLC film" (page 15 of specification). The Examiner notes that there are a huge number of materials, both organic and inorganic, that are known to possess hardness values between that of polyimide resin and DLC and which are not listed in applicants' specification. At which point are these materials considered "hard" and at which point are they not? The specification does not provide sufficient guidance, which is why the Examiner deems that a 112 2nd Paragraph rejection is proper. The Examiner notes that this rejection can be overcome by simply removing the term "hard" from the claim and/or reciting that the membrane is formed from the group consisting of diamond-like carbon, TiN, CrN, SiC, Al₂O₃ and AlN (see specification, page 20). The Examiner notes that the term "hard" should be removed in all cases.

With regard to the rejections predicated on Kokai et al., applicants repeat their arguments that "Kokai and Günsel should not be combined as they teach away from each other" (page 4 of response). The Examiner respectfully disagrees.

Applicant(s) are reminded that the rejection is based on the entire reference and not just a piecemeal analysis of the cited reference. It appears that applicants are focusing on the first embodiment taught by Kokai et al. and are ignoring the disclosure related to the second embodiment (col. 3, line 29 bridging col. 5, line 58). The Examiner notes that the second embodiment (which is the subject matter relied upon in the rejection of record) teaches a multi-layered protective coating comprising an oxide layer (i.e. applicants' inorganic film), "a first protective layer made of a polymer" (i.e. applicants' organic film), and "a second protective layer formed on the first protective layer and made of a carbonaceous material" (i.e. applicants' hard membrane). The Examiner notes that Kokai et al. teach that the thickness values of the first protective layer can be as thin as 2 nm (col. 4, lines 25 - 31) and that the second protective layer can be as thin as 1 nm (col. 5, lines 49 - 58), as well as recognizing that the thickness of the protective layer is a results effective variable which is a compromise between improved durability (i.e. thicker layers) and reduced spacing loss (i.e. thinner layers). The Examiner notes that this exactly identical compromise is taught and recognized in the Günsel et al. reference! Given that the minimal total thickness of the Kokai et al. teaching back in 1986 (3 nm) is almost identical to the range in thickness values desired by Günsel et al. over a decade later in 1999 (3 nm or less for 40 Gbit recording), the Examiner maintains that the references are properly combinable. Furthermore, the Examiner notes that Günsel et al. explicitly teach that larger thickness values are acceptable and merely result in reduced maximum areal recording density (Paragraph 0010 - "to achieve an areal density of about 10 gigabytes per square inch, a flight height in the range of about 10-15 nm is required").

The Examiner feels compelled to note that much of the disagreement between the Examiner and applicants appears to stem from the extremely broad nature of the present claims versus the disclosed invention in applicants' as-filed specification. While it is certainly permissible to file extremely broad claims (and obviously desired for the extra breadth of coverage), the Examiner notes that prosecution becomes harder because of the large number of materials which can be construed to read on claims of such breadth. In particular, the scope of the terms "inorganic film", "organic film" and "hard membrane" given to these terms in the claims are much broader than the materials described in applicants' disclosure. E.g. the Examiner notes that limiting the inorganic film to a nitride film or an oxide of Si would appear to be sufficient to exclude the oxide of the magnetic layer from reading on the term "inorganic film".

Similarly, the inventive concept of applicants' invention appears to be the use of layers such that they relieve the stress of the other layers, but this feature is not claimed (pages 12 - 14). While the Examiner would probably make an inherency-type rejection for such a feature, applicants would be invited to present evidence in the form of an affidavit or declaration that factors other than just the "hardness" of a layer would determine whether a layer could function to absorb the stress caused by adjacent layers (if such is true)..